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8.1 HW

Key p 414 11-17, 25-33 odd 36, 37

11. $(-5, 3)(-3, -7)$

$$M(-4, -2)$$

13. $(5, 9)(12, 18)$

$$M\left(\frac{17}{2}, \frac{27}{2}\right)$$

15. $(4, 3)(-2, 1)$

$$\frac{4,3+1,9}{2} \quad \frac{-2,1+7,5}{2}$$

$$(3, 1, 2, 7)$$

17. $\left(\frac{1}{3}, \frac{3}{4}\right)\left(-\frac{1}{4}, \frac{1}{2}\right)$

$$\frac{\frac{1}{3} - \frac{1}{4}}{2}$$

$$\frac{\frac{3}{4} + \frac{1}{2}}{2}$$

$$\frac{\frac{1}{12}}{2}$$

$$\left(\frac{1}{24}, \frac{5}{8}\right)M$$

25. $(1, -14)(-6, 10)$

$$d = \sqrt{(1 - -6)^2 + (-14 - 10)^2}$$

$$49 + 576$$

$$\sqrt{625}$$

$$d = 25$$

$$\boxed{27}$$

$$(9, -2)(12, -14)$$

$$d = \sqrt{(12 - 9)^2 + (-14 - -2)^2}$$

$$9 + 144$$

$$\sqrt{153}$$

$$9 \wedge 17$$

29. $(2, 3)(-4, 5)(3, 7)$

$$3\sqrt{7}$$

$$d = \sqrt{(2, 3 - -4, 5)^2 + (-1, 2 - 3, 7)^2}$$

$$46, 24 + 24, 01$$

$$d = \sqrt{70, 25}$$

31. $\left(0, \frac{1}{5}\right)\left(\frac{3}{5}, -\frac{3}{5}\right)$

$$d = \sqrt{\left(\frac{3}{5}\right)^2 + \left(\frac{1}{5} + \frac{3}{5}\right)^2}$$

$$\frac{9}{25}$$

$$+ \frac{16}{25}$$

$$=$$

$$1$$

$$\left(\frac{2\sqrt{3}}{3}, \frac{\sqrt{5}}{4}\right) \left(-\frac{2\sqrt{3}}{3}, \frac{\sqrt{5}}{2}\right)$$

$$33. d = \sqrt{\left(\frac{2\sqrt{3}}{3} - \frac{-2\sqrt{3}}{3}\right)^2 + \left(\frac{\sqrt{5}}{4} - \frac{\sqrt{5}}{2}\right)^2}$$

$$\left(\frac{4\sqrt{3}}{3}\right)^2 \quad \frac{2\sqrt{5}}{4}$$

$$\frac{16}{3} + \frac{5}{4}$$

$$\sqrt{\frac{271}{48}} = \frac{\sqrt{271}}{2\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{813}}{12}$$

$$36. RS = \sqrt{(-4-4)^2 + (6-5)^2} = 64+1 = \sqrt{65}$$

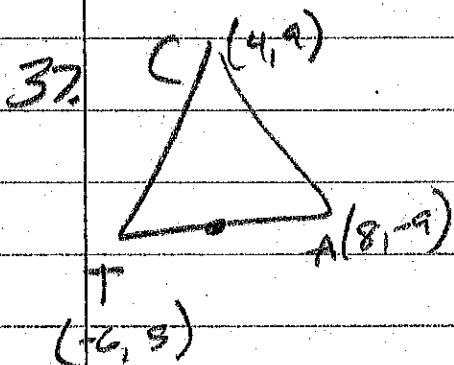
$$ST = \sqrt{(4-6)^2 + (5-3)^2} = 4+4 = \sqrt{8} = 2\sqrt{2}$$

$$TV = \sqrt{(6-5)^2 + (3-(-8))^2} = 1+122 = \sqrt{122}$$

$$VR = \sqrt{(5-(-4))^2 + (-8-6)^2} = 81+196 = \sqrt{277}$$

$$P = \sqrt{65} + 2\sqrt{2} + \sqrt{122} + \sqrt{277} \text{ units}$$

$$\approx 38.6 \text{ units}$$



$$M = (1, -2)$$

$$C(4, 9)$$

$$CM = \sqrt{9 + 121}$$

$$= \sqrt{130} \text{ units}$$